Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-18 (Canceled)

Claim 19 (Currently Amended) A method for providing information correlated to one or more probe sets on ~~one or more~~ biological probe arrays, wherein each of the biological probe arrays comprise a plurality of the probe-sets that each include one or more probes having complementary sequence to a sequence of a target molecule expressed from a gene or EST ~~probe set is capable of the identification of a biological molecule~~ comprising:

receiving a query over a network comprising a user selection of one or more ~~probe set identifiers, wherein each probe set identifier is a name~~ names each arbitrarily assigned by a probe array manufacturer to specifically identify a probe set ~~that specifies the identity of a probe set~~ , wherein ~~selected~~ the user types the selection of the names into a web browser operated on a user-side client and the names come to the attention of the user from results of one or more experiments performed using the ~~one or more~~ biological probe arrays;

identifying the gene or EST that corresponds with each selected arbitrary name using data that defines an association between the arbitrary name, specifically identified probe set, and the corresponding gene or EST;

~~correlating each probe set identifier with a protein sequence;~~

correlating ~~the protein sequence~~ each gene or EST with a set of protein family data using a protein sequence that corresponds to the gene or EST to identify the protein family; and

providing the set of protein family data over the network to the user via the web browser.

Claims 20 – 48 (Canceled)

Claim 49 (Currently Amended) A system for providing information correlated to one or more probe sets on ~~one or more~~ biological probe arrays, wherein each of the biological probe arrays comprise a plurality of the probe-sets that each include one or more probes having complementary sequence to a sequence of a target molecule expressed from a gene or EST, comprising:

an input manager for receiving a query over a network comprising a user selection of one or more ~~probe set identifiers, wherein each probe set identifier is a name~~ names each arbitrarily assigned by a probe array manufacturer to specifically identify a probe set ~~that specifies the identity of a probe set~~ , wherein ~~selected~~ the user types the selection of the names into a web browser operated on a user-side client and the names come to the attention of the user from the results of one or more experiments performed using the ~~one or more~~ biological probe arrays;

identifying the gene or EST that corresponds with each selected arbitrary name using data that defines an association between the arbitrary name, specifically identified probe set, and the corresponding gene or EST;

~~a determiner for correlating each probe set identifier with a protein sequence;~~

a correlator for correlating ~~the protein sequence~~ each gene or EST with a set of protein family data using a protein sequence that corresponds to the gene or EST to identify the protein family; and

an output manager that provides the set of protein family data over the network to the user via the web browser.

Claim 50 (Previously Presented) The system of claim 49, wherein:

the protein family data comprise biological process, molecular function, or cellular location information.

Claim 51 (Previously Presented) The system of claim 49, wherein:

the protein family data comprise protein domain information.

Claims 52 – 63 (Cancelled)

Claim 64 (Previously Presented) The method of claim 19, wherein:

the protein family data comprise biological process, molecular function, or cellular location information.

Claim 65 (Previously Presented) The method of claim 19, wherein:

the protein family data comprise protein domain information.

Claim 66 (Cancelled)

Claim 67 (Currently Amended) The method of claim 19, wherein:

the correlation of the protein family data include a consensus sequence of the protein family that is aligned to the protein sequence and the alignment is provided to the user.

Claim 68 (Currently Amended) The method of claim 19, wherein:

correlating the protein sequence with [[a]] the set of protein family data comprise a determination of sequence or structural similarity between the protein sequence and the set of protein family data.

Claim 69 (Currently Amended) The method of claim 68, wherein:

the determination of sequence or structural similarity comprises implementing a plurality of Hidden Markov Models each trained to a specific protein family associated with [[a]] the set of protein family data.

Claim 70 (Previously Presented) The method of claim 69, wherein:

the protein sequence is determined to be correlated with the set of protein family data when a value associated with the Hidden Markov Model for the protein sequence and the set of protein family data is above a threshold value.

Claim 71 (Previously Presented) The method of claim 49, wherein:

the output manager provides a graphical user interface that includes the protein sequence aligned to a consensus sequence associated with the set of protein family data.

Claim 72 (Currently Amended) A method for providing information correlated to one or more probe sets on ~~one or more~~ biological probe arrays, wherein each of the biological probe arrays comprise a plurality of the probe sets that each include one or more probes having complementary sequence to a sequence of a target molecule expressed from a gene or EST ~~probe set is capable of the identification of a biological molecule~~ comprising:

receiving a query over a network comprising a user selection of one or more ~~probe set identifiers, wherein each probe set identifier is a name~~ names each arbitrarily assigned by a manufacturer to specifically identify a probe set ~~that specifies the identity of a probe set~~, wherein ~~selected~~ the user types the selection of the names into a web browser operated on a user-side client and the names come to the attention of the user from ~~the~~ results of one or more experiments performed using the ~~one or more~~ biological probe arrays;

identifying the gene or EST that corresponds with each selected arbitrary name using data that defines an association between the arbitrary name, specifically identified probe set, and the corresponding gene or EST;

correlating each ~~probe set identifier~~ gene or EST with a set of protein family data; and

providing the set of protein family data over the network to the user via the web browser.